

Annual Report January 2014

The mission of VTrans is ...

VTrans' mission is to provide for the safe and efficient movement of people and goods.

The vision of VTrans is ...

The Vermont Agency of Transportation's vision is a safe, reliable and multimodal transportation system that promotes Vermont's quality of life and economic wellbeing.



HIGHLIGHTS OF THE YEAR

- Project Initiation and Innovation Team
 - The PIIT hits stride delivering dozens of scoped projects to Design PMs
 - Spreading the word to RPC's and Towns about ABC and innovative construction
- Accelerated Bridge Construction
 - More than 50% of Towns request ABC projects and take advantage of Act 153
 - Standardized designed details developed and are in use in construction
- Innovative Contracting Continues
 - SEP-14 continues with Woodstock deck replacement
 - Brattleboro IM 091-1(65) Design Build Project is the largest project in VTrans history!
 - Richmond Checkered House Bridge Design Build Project complete
 - Structures hiring a Construction Manager General Contractor (CMGC) to replace Two bridges along I-91 in Hartford utilizing innovative lateral slide techniques
 - Incentive/Disincentive contracting is utilized more to "get in, get out, stay out"
- Bridge Maintenance
 - Improved coordination with Ops Technical Services and Ops Bridge Crew on addressing critical maintenance reports and structural deficiencies
- Tropical Storm Irene
 - All Irene Recovery bridges reconstructed, rehabilitated, or under contract
- Project schedules improve with many months generating zero errors
- Structures bid 82% of projects on time
- We moved! This was a huge effort that involved everyone in the Section. There has been a significant increase in electronic file management as a result
- VAOT Structures received a SHRP2 Grant for C19 "Expediting Project Delivery"

Key Performance Indicators

- Agency Performance Measure
 - % Structural Deficient <6% Interstate, <10% State, <12% Town, and <10% Culvert
- PDD Performance Indicators
 - Deliver 80% of project on, before or within one month of scheduled bid date.
 - Deliver 80% of Preliminary and Pre-Contract Plans within one month of scheduled date
- Tri-State Performance Measures
 - Bridge Condition Index for Interstate, State, and Town Bridge Systems
 - % Structurally Deficient by deck area
- Section Performance Measures
 - National Bridge Inspection Program (NBIP) 23 Metrics
 - Define Projects in less than 12 months
 - Design ABP Projects in less than 24 months (Goal >80%)
 - Design conventional projects in less than 60 months (Goal >80%)
 - Procure projects in less than 17 weeks (Goal>80%)
 - Complete Construction by Contract Completion Date (Goal>70%)

Section Management

Inspection and Management

- Inspected all structures with reduced inspection intervals (12 month or 6 month)
- Inspected all SD structures due this year
- Inspected all NHS structures due this year within 24 months of its prior inspection
- Inspectors without 2 week inspector training course were trained this year
- Significant improvements are underway in Prioritization and in Project Initiation
- Teaming with UVM to develop predictive models for bridge deterioration

Projects

- Advertised the last of the Irene ER projects. ABC construction standards were developed for a number of these projects and will be used to efficiently design and detail others
- Checkered House Bridge Design-Build truss widening project was completed this year
- The restoration project for the Lake Champlain Bridge was (nearly) completed marking the completion of this huge project
- Brattleboro BRs 8&9 N&S Design-Build project Team was selected and awarded VTrans largest contract ever. This brings the total of length of D-B bridges to just over 1 mile
- Rochester VT73 Fast Four are awarded through the Accelerated Bridge Program utilizing ABC on 3 bridges and all four to be completed in one season

Laboratory for Innovation

- Work began on Structures' first CMGC project to build new I91 BRs 43N&S alongside existing bridges so they can be slid into position during a short interstate closure
- First Design Build project with an Alternate Technical Concept phase is incorporated into the Ryegate project to allow scopes other than that in the RFP
- Brookfield Floating Bridge project is developed using FRP floats
- Greater use of deep foundations – drilled shafts, piles, and micro piles
- Developed ABC stds. that can be used for different size bridges using tables for dimensions
- Developed Vermont's first "Bridge in a Backpack" in Fairfield
- Greater use of electronic resources
 - PMs have laptops for meetings, presentations, and use in the field
 - PMs and Resource groups further trained in Artemis usage resulting in better schedules and tracking of work activities
 - PMs trained in the use of CPWs resulting in better budget forecasting
 - Shop drawings are now reviewed through SharePoint
 - Using databases and mail merge to automate many forms
- Implemented ERP within the Section and provided assistance to others

Unmet Needs

- 335 structurally deficient bridges including state shorts
- Over 550 functionally obsolete long structures
- Over 200 restricted bridges – Restricted, posted, temporary, or closed
 - No authority to close or post Town Bridges
- Critical Maintenance Reports issued regularly
- Not yet meet full NBIP compliance

PDD Structures

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Goals For Next Year

- Continue to develop bridge deterioration models
- Develop predictive capabilities on asset condition given varying funding levels
- Develop enough scoping projects such as there is a small scoping shelf list
- Develop enough projects to have a modest number of advanced development projects available should funds become available
- Reach full compliance with NBIP Metrics
- Continue to innovate

Section Statistics

Interstate % SD = 2.56% (goal <6%)
 State % SD = 8.25% (goal <10%)
 Town % SD = 9.49% (goal <12%)
 Number of Projects Defined = 30
 Number of Projects Designed = 27
 % of Projects Defined within 12 months = 23% (goal >80%)
 % of ABP Projects designed within 24 months = 86% (goal >80%)
 % of Conventional Projects designed within 60 months = 77% (goal >80%)
 # SD bridges addressed = 41
 Advertise all project within one month of snapshot date = 82% (goal <80%)

Goal: 80% no later than 30 days



Advertisement for All Structures (VTrans/Operations)

Program	Year To Date			Remainder of Year			Projected Year End		
	On-Time	Delayed or Removed	% On-Time	On-Time	Delayed or Removed	% On-Time	On-Time	Delayed or Removed	% On-Time
Bike & Pedestrian Facilities	0	1	0	0	0	0	0	1	0
Interstate Bridges	1	1	50	0	0	0	1	1	50
State Highway Bridges	12	1	92	0	1	0	12	2	86
Town Highway Bridges	7	1	88	0	1	0	7	2	78
All Structures	27	4	87%	0	2	0%	27	6	82%

PDD Structures

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Projects Defined per year showing number and percent with Definition phase less than 12 months

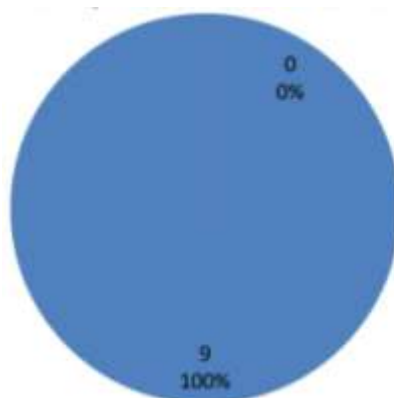


2012

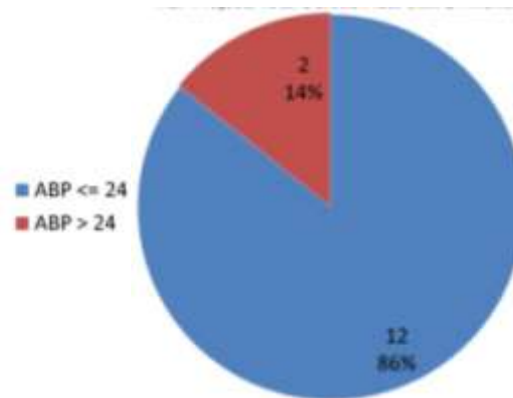


2013

ABP projects Designed per year showing number and percent with Design phase less than 24 months

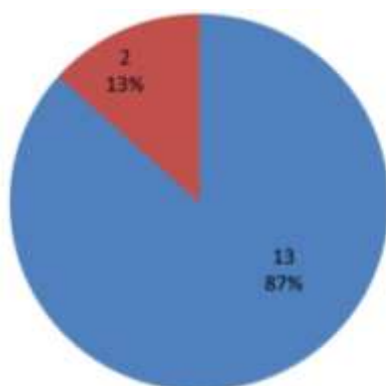


2012

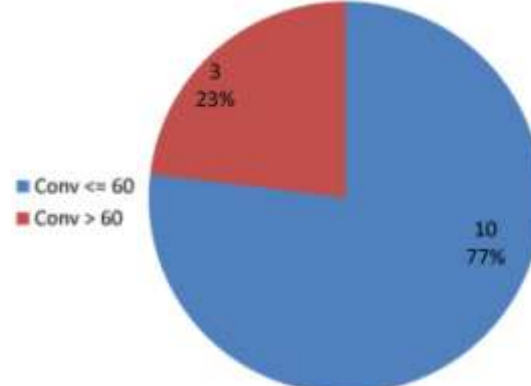


2013

Conventional projects Designed per year showing number and percent with Design phase less than 60 months



2012



2013